



INDIANA ACADEMY OF SCIENCE NEWSLETTER

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First Biodiversity Survey of Goose Pond Fish and Wildlife Area (July 16-17): 8000 Acres of Restored Wetlands, Prairies, and Bottomland Tree Plantings

by Barbara Simpson, Friends of Goose Pond; Brad Feaster, Indiana Department of Natural Resources;
Daryl R. Karns, Hanover College; and Donald Ruch, Ball State University

As described in the previous IAS newsletter, the Indiana Academy of Science (IAS), the Rivers Institute at Hanover College, the Friends of Goose Pond, and the Indiana Department of Natural Resources are partnering to conduct the first biodiversity survey of Goose Pond Fish and Wildlife Area (Goose Pond FWA), an 8000 acre wetland restoration located near Linton in southwestern Indiana. This is a first step in assessing an important Indiana wetland. The bird surveys that have been conducted by Lee Sterrenburg have identified Goose Pond as an avian hotspot in the state, but there is very little known about other taxa. This survey is not being planned like a BioBlitz, in which there is a public education component; the goal of the Goose Pond Survey is to obtain baseline biodiversity information for this important site and lay the groundwork for future studies. **We have identified taxonomic teams for vascular plants, fungus, all vertebrates, mussels, and a variety of invertebrates; we are still looking for taxonomic expertise with non-**



*Goose Pond (From IDNR Fish and Wildlife
<http://www.in.gov/dnr/fishwild/3094.htm>)*

vascular plants, and some invertebrate groups, especially dragonflies and damselflies, butterflies, and snails. Some meals will be provided and free lodging is available for scientists who will stay overnight. Please contact **Daryl R. Karns** (karns@hanover.edu) or **Don Ruch** (druch@bsu.edu) if you have taxonomic expertise in a particular group and are interested in participating.

Future IAS Meetings

At the Fall 2009 meeting the Council approved moving the annual meeting from the fall to the Spring. The 2011 spring meeting will be held at IUPUI on March 4th/5th. On October 9, 2010 the Academy is inaugurating the first of what promises to become a signature annual or biannual event, **The IAS Fall Forum on Science and Society**. The Forum can take a variety of forms, including contemporary topics of concern and recognition of the work of outstanding Indiana Scientists. This year's lecture will be presented by Dr. **Elenor Ostrom** from IU-Bloomington, recipient of the 2009 Nobel Prize in Economic Sciences

for her work on the management of common area as it relates to sustainable resource yields.

Dr. Ostrom's talk will be followed by a panel of three speakers who will discuss how Dr. Ostrom's approach to conserving the commons is applicable to their organization's efforts. The members of the panel are: **John Bacone**, Director Nature Preserves, DNR; **Jesse Kharbanda**, Executive Director, Hoosier Environmental Council; and **Mary McConnell**, Indiana State Director, The Nature Conservancy.

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The Fall Forum will be held at the Scottish Rite Cathedral in Indianapolis beginning at 10AM. A luncheon and business meeting will follow for Academy members. More

information will be forthcoming about the event. Please put the date on your calendar and plan to attend.

-- *Jim Curry*
2010 IAS President

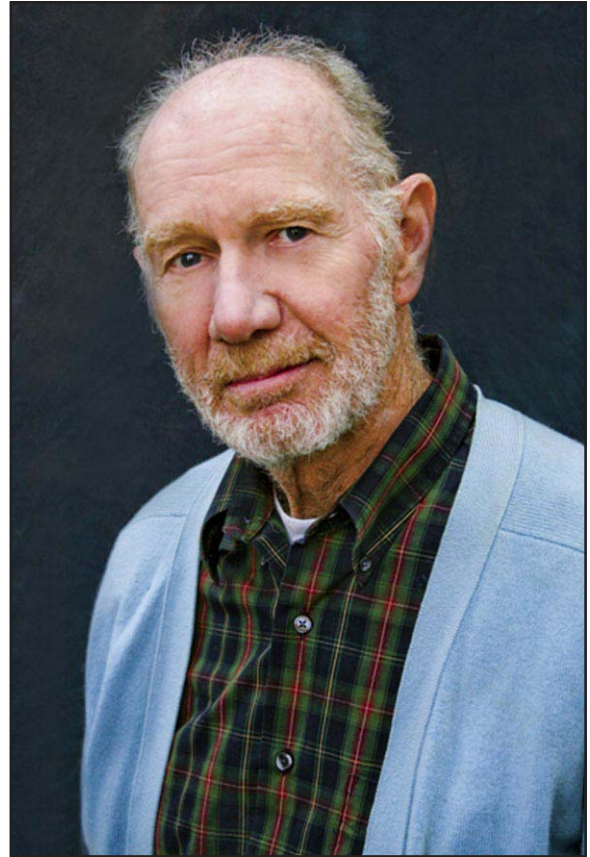
From the President: Important Changes to Academy Structure

Some very important things have been happening that all members of IAS need to know about. As I reported in the December, 2009, issue of the Newsletter I named a committee (Futures Task Force) at the Fall meeting to prepare recommendations and an agenda for the spring meeting of the Council. The members of the task force were Rebecca Dolan, Richard Kjonaas, Paul Rothrock, Ed Squires, and me. Bill McKnight served in a support role to the task force with the title "Transition Officer."

The task force met monthly prior to the spring meeting. The Council was convened to consider the Task Force recommendations at Butler University on April 16, with 19 members present. As chair of the Futures Task Force I introduced three motions for consideration and action.

1. "The Future Tasks Force recommends to the Council that the Executive Director Position be upgraded to a full-time position beginning 11/1/2010. It further recommends that funds to support the position (salary, equipment and supplies, travel, etc.) be made available from the general funds and from Foundation funds. The FTF further recommends that a permanent office space for the Academy be considered in the future dependent upon success as reflected in membership recruitment, media relations, development, and the efficient handling of routine Academy activities. Selection to be made by a 3-member search committee appointed by the President, with the recommended candidate presented to the Council for approval." The motion carried by majority vote.

2. "The Futures Task Force recommends that upon implementation of a full-time Executive Director position, the number of standing committees be reduced from 15 to 5. The standing committees to be retained will be: Biodiversity and Natural Areas, Budget, Editorial Board, Nominations and Elections, and Science and Society." An amendment was proposed and accepted to create a Youth Activities committee with responsibility for Junior Academy, Science Talent Search and Student Grants. A second amendment to create a Publications committee to include Editor of the Proceedings, Editor of the Newsletter, Editor of Special Publications, Librarian, and Webmaster was put



Jim Curry, 2010 IAS President

forward and accepted. The motion carried by majority vote.

3. "The Futures Task Force recommends to the Council that the current Executive Committee/Council governance structure be discontinued as of January 1, 2011 and that an 8-member Council be adopted to govern Academy affairs. The members will include the President, President-elect, immediate Past President, Secretary, Treasurer, Research Grants Committee chair, Foundation Committee chair, and the Executive Director (ex-officio). A Motion to postpone until the fall meeting was put forward which carried by unanimous consent.

The IAS Constitution and Bylaws are being revised and condensed into a single document which will be presented to the members at the Fall meeting for discussion and approval. The revision will include the changes recommended in all three motions.

Following the Council's approval of a full-time Executive Director, as President I named a search committee to seek nominations and fill the position. The members include Jim Berry (chairperson), Clare Chatot, Alice Heikens, and Robert Waltz.

The changes recommended by the Futures Task Force and approved by the Council are designed to improve the governance structure of the Academy by centralizing authority. The current governance structure of IAS does not provide or permit strong central leadership. The Academy has been governed by a large number of committees, each with different functions and goals and with little coordination or information exchange between them. Decisions, when they are made at all, pass through so many different layers of governance that very often what was intended to be a thoroughbred horse ends up as a

camel. Long range planning, networking with other science academies or organizations, active membership recruitment, private and foundation development efforts, information storage and retrieval, evaluation of programs and practices, etc. have all been neglected under this grass-roots system of governance. The addition of a full-time Executive Director, reduction in the number of committees and reassigning the responsibilities of those eliminated to the Director, and the consolidation of the Council and Executive Committee into an eight member Council, are all designed to redress these problems and reinvent the Academy. The full-time Executive Director will be expected to provide strong central leadership under the authority of the President and Council, but policymaking decisions will continue to reside with the elected leadership.

-- Jim Curry
2010 IAS President

About the New Academy Web Site

Article #1: The Indiana Academy of Science is expanding its Internet capabilities. A web design team was hired to create a new web site with expanded capabilities. In addition to providing all of the information previously found on our web site, with our new web site it will be possible to update your member profile directly, giving you the opportunity to check the accuracy of the information housed there. You will be able to renew your membership, register for meetings and purchase books and special publications using your credit card. A member's only section will permit you to find the names, phone numbers and emails addresses of other members, enhancing your opportunity to communicate with colleagues throughout the state.

If the work schedule for the new web design is met, the **new web site will be completed and launched during late July 2010**. Take a look at the new web site and surf through the options provided. If you find errors, or note that something is lacking, please let me know at foos@iue.edu.

-- Mike Foos
IAS Web Master

Article #2: The new Indiana Academy of Science web site features a large, attention getting photograph on the front page. The front page will host a group of five photographs each connected to one of five buttons that appear on the page. By clicking through the buttons a viewer can scan through the group of photographs. The photographs on the web site will be changed at regular intervals. The front page of the web site also holds a second, smaller photograph relating to an IAS activity. Currently the photograph of an upcoming speaker appears on this page. At other times photographs of IAS members engaging in a project; IAS officers, Indiana scientists or science facilities would be appropriate.

We would like to have photographs from members to visually highlight natural science in Indiana and the Indiana Academy of Science. This is a call to members to submit photographs to be used for on the IAS web site front page. If you have photographs that would show something about the natural history of Indiana, or about the research being conducted in Indiana, that you would like to see on the IAS web site, please contact me at foos@iue.edu. Thank you for participating in this project.

-- Mike Foos
IAS Web Master

Executive Director Position, Indiana Academy of Science

Full Time Professional Position

The Council and Officers of the Indiana Academy of Science announce a professional career opportunity for a dynamic Executive Director to lead the Academy through 21st Century challenges. The new director will maintain and expand interactions with the various science communities in Indiana and broaden and affirm partnerships with other Indiana and regional science institutions and associations. Foci of the position include increased engagement with the membership, strengthening membership involvement, enhancing the experience of high school students in the Indiana Junior Academy of Science, and recruiting and building external relationships with partnering institutions, including, e.g., educational institutions, scientific societies, and industry.

The Academy seeks an individual who has demonstrated experience with science and interacting with communities of science. The position is a two year initial contract renewable for subsequent two year terms. The Executive Director is expected to successfully engage volunteers, partnerships, and form other positive relationships with various technical communities and other communities characterized by their science-enrichment opportunities. A Bachelor's degree from an accredited institution, demonstrated excellence in oral communication and a minimum of two years of leadership experience is required. An advanced academic degree, Master's or Ph.D., and management experience are preferred. Information regarding the Academy and a more detailed listing of duties associated with this position are available on the Academy's website at www.indianaacademyofscience.org. Applicants must submit a written resume or vita articulating their qualifications and experience, with full employment disclosure; a written statement of interest in the position, including a personal vision or value statement in response to the vision statement and complete job description posted on the website; unofficial transcripts; and contact information for three references. Applications will be accepted beginning immediately. Closing date: Close of business, Monday, July 12, 2010. The starting date for the position is expected to be November 1, 2010. A background check of finalist candidates will be conducted. All application material should be provided electronically to the attention of Dr. **James W. Berry**, Search Committee Chair, via Amanda Boyers at aboymers@franklincollege.edu. Questions can be directed to Dr. James Berry at 317-940-9344.

The incumbent is expected to be located in the Indianapolis area. It is anticipated that the Indiana Academy of Science administrative office will be housed in the Indiana State Museum in Museum Row (includes Indianapolis Zoo, NCAA Headquarters and Hall of Champions, Eiteljorg Museum, Indiana Historical Society Building, and the Indiana State Government office campus) in downtown Indianapolis. Archives of the Academy are located within short walking distance in the Indiana State Library. Information about the Indianapolis community and quality of living may be found at various websites including:

General:

<http://indianapolis.about.com/od/speciallifestyles/tp/TenThingsToLove.htm>

http://en.wikipedia.org/wiki/Downtown_Indianapolis

Business:

<http://www.indychamber.com/>

Downtown:

<http://www.indydt.com/g>

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The Indiana Academy of Science is an equal access, equal opportunity employer.

Handlenses for Sale

A handlens (loupe) is a critical item for all field biologists, geologists, gardeners and anyone interested in natural history, but finding a local source is difficult. The Academy is now offering Bausch & Lomb 14x Coddington lens (w/ lanyard) for sale at a substantial discount. The lenses will be listed on the soon to be launched new website, and also will be available at Academy sponsored field trips and meetings. The lenses will sell for \$22 for IAS members and \$28 for non-members. The shipping and handling fee is \$3.50, and \$1.00 for each additional lens sent in the same package.

These are excellent lenses, and with proper care will last a lifetime. To order contact **Bill McKnight** at iaspublications@indy.rr.com or 317-205-5440.

-- *Bill McKnight*

Call for Nominations for Fellowship in the Indiana Academy of Science

The Academy's bylaws (I,1,11) define a Fellow as "A member with recognized standing as a scientist who has contributed to the objectives of the Academy, been recognized by two-thirds of the Committee on Awards, and been approved by a majority of the members voting at any Spring or Annual meeting. The title is awarded as an honor and is independent of the class of membership." Special consideration should be given to: length of membership in the Academy (minimum of 3 years); the nature of service to the Academy and to the advancement of science in Indiana; service to education in science; and achievements in scientific research. Nature of service to the Academy means attending IAS meetings, presenting papers at meetings, publishing in the Proceedings, serving

as an officer, as a committee chair, as a committee member, playing a role in organizing Academy functions, etc.

Nominations should be sent at least 6 weeks prior to the Annual Meeting of the Academy to the Chair of the IAS Committee on Awards. The current Chair is **Clare Chatot**, Department of Biology, Ball State University, Muncie, IN 47306 (e-mail: cchatot@bsu.edu) Nominations should include the nomination form (available on the IAS web site) signed by two Academy Fellows as well as a cover letter describing the qualifications of the nominee for fellow status. A brief CV should be included if possible.

--Clare Chatot, Chair
Committee on Awards

Indiana Academy of Science 2010 Spring Grants

Philippe Vedon , IUPUI	\$3,000.00	Kent E. Edmonds , IU Southeast	\$2,472.00
"Landscape control on riparian zone function vis-à-vis multiple contaminants associated with pollution trade-off"		"Regulation as a compensatory testicular hypertrophy in the Marsh Rice Rat"	
Allison Veach , Ball State University	\$2,358.00	Kimberly Rosvall , Indiana University	\$2,900.00
"Assessing sediment $\delta^{15}\text{N}$ as a predictor for pharmaceutical concentration in freshwater"		"C ₀ -variation between brains and behavior: evolutionary implications of individual and sex differences"	
Clare L. Chatot , Ball State University	\$3,000.00	Luke Hoekstra , Indiana University	\$2,914.00
"Effects of Dilantin induced changes in Cyclin A expression on DNA synthesis by DNA Polymerase α and β in preimplantation mouse embryos"		"The significance of energetic constraints on the evolution of inducible gene expression"	
Windy McBride , Indiana State University	\$3,000.00	Priya Hewavitharanage , U. of Southern IN	\$2,252.00
"Using a geochemical approach to estimate metal bioavailability at the Friar Tuck Mining Complex, Dugger, Indiana"		"Synthesis of a new class of BODIPY based conjugated polymers"	
David Bohnert , Indiana State University	\$3,000.00	Kenneth E. Walsh , U. of Southern IN	\$2,336.00
"Dendrochemistry as a tool to evaluate the local environmental impact of creating an artificial lake: the example from Patoka Lake, Indiana"		"Synthesis of α -C-Glycosides of 2-amino sugars from glycal aziridine"	
Amanda Jamison , Indiana State University	\$2,550.00	Kelly Boatright , IUPUI Fort Wayne	\$2,500.00
"The impact of three malarial parasites: and investigation into the avian host-parasite relationship"		"Characterization of nearshore fish communities and habitat in littoral zone of Indiana glacial lakes with respect to shoreline development"	
Jason Borchert , Indiana State University	\$1,929.00	William L. Murphy , Smithsonian Institution	\$1,825.00
"Evolution in thermal game and the impacts of climate change"		"The snail-killing flies of Indiana (Insecta: Diptera: Sciomyzidae)"	
Jennie M. Carr , Indiana State University	\$2,856.00	Donald Ruch , Ball State University,	\$500.00
"Avian Torpor as a trade-off between energy conservation and predation"		"Examination of the flora and floral communities of Mary Gray Bird Sanctuary, Fayette County, Indiana"	
		Welch Award	

Congratulations From the Academy

Two previous Indiana Academy of Science grant winners were among the top winners at the National Junior Science and Humanities Symposium held at Bethesda, Maryland, from April 28-May 2, 2010. Both **Timothy D. Tripper** of Marian High School in Mishawaka and **John Tyler Barnes** of Northwestern High School in Kokomo, won second places in their respective divisions. Each young man won an \$8000 scholarship and each was named a runner-up for a 2 week trip to London for the London Fortnight. As it happened, Tim actually got to take the trip because the first place winner declined the trip.

Tim's project in the Medicine Health category was "Can Secreted Proteins from Whole-cell Mycobacteria Be Detected Using MALDI_TOF Mass Spectrometry?" His classroom teacher is **Ken Andrzejewski**. His mentor at Notre Dame was Dr. **Matthew Champion**.

Tyler's project in the Environmental Science category was "Acid Mine Drainage Remediation: A Novel Approach." His classroom teacher is **Patricia Zeck**.

The Indiana competition through which the students qualified for the national competition was held under the sponsorship of St. Mary-of-the-Woods in March under the leadership of Dr. **David Grabowski**. Three other Marian High School students from the Indiana competitions also attended. **Mike Hunckler** presented in the Poster Session. Also attending in the Indiana delegation were **Patrick Russell** and **Michelle Baranay**. Both Dr. Grabowski and Mrs. Zeck accompanied the group to the competition. Additional activities included pre-selected field trips to places such as the Aberdeen Proving Grounds and USAMRIID, dinners with nationally known speakers, and the opportunity to hear other student presenters. Free time on Saturday afternoon was a subway trip to Washington to "walk the Mall." The students definitely parlayed their grant support into projects worthy of the national competition and expressed their gratitude for the grants.

--Patricia Zeck